

MICROMETRIC MEASUREMENTS

In the Journal of the Royal Microscopical Society for Oct., 1910, is a scholarly paper by Dr. Marshall D. Ewell, twice President of this Society, on "Comparative Micrometric Measurements." The paper is too technical to report in brief, but the writer's conclusions are:

1. That measurements of micrometric spaces, from .01 mm. to 0.1 mm., when made in large series by experienced observers, may be trusted as accurate within limits quite appreciably less than 0.1 μ .
2. That it is best to use the lowest power that will properly resolve the object; and that greater magnification for purposes of more accurate measurement is illusory.

THE CENTROSOME IN LIVING PROTOPLASM

The studies of living protoplasm are continually becoming more numerous and successful. The centrosome, for example, has been seen in living cells as follows: Of the mucous membrane from the stomach of the frog, the cat, the dog, and the horse; of the posterior corneal epithelium of the cat; in the summer ova of the turbellarian *Mesostoma*; in the early cleavage cells of the embryo of the nematode *Ascaris*; and in the eggs of certain species of sea-urchins.

LIFE CYCLE IN AN AMEBA

Professor Maynard M. Metcalf, Journal Exp. Zool., Oct. 1910, describes some interesting conditions believed by him to be stages in the life-cycle of an Ameba. Upon the body of active Amebae were formed numerous protuberances or "gemmules." These gemmules finally became free, and are believed, after a period of inactivity, to give rise to small bi-flagellate monads containing a part of the original nuclear matter. These may withdraw their flagella, become ameboid, and occasionally divide by binary *fission*. Instances of copulation, and of permanent fusion, of these flagellospores in pairs were observed. The result was a typical small crawling ameba (of the *blattae* type).

DIATOMS AS A FOOD SUPPLY FOR ORGANISMS

Systematic study of plankton, and experiments in rearing amebae and larvae of different kinds, are all increasing our appreciation